TEACHERS' RETIREMENT BOARD

REGULAR MEETING

SUBJECT: State Teachers' Automation Redesign Team (START) Project Update

ITEM NUMBER: 6

ATTACHMENT(S) 3

ACTION: ___

DATE OF MEETING: March 9, 2000

INFORMATION: X

PRESENTER(S): Mr. Costa

This report covers the period of January 2000 and February 2000 for the START Project. Work continues on the finalization of specifications, development of software, testing of software and conversion of data.

As discussed at the February 3, 2000, Teachers' Retirement Board meeting, the Project would not meet the pre-trial run conversion date at the end of the month. It was also stated that this might jeopardize the Implementation Date of July 2000. Project Team Leaders met with the Oversight Consultant, Laura Metzger, and SPL WorldGroup Consulting's, Project Director, Maureen Rice to discuss the feasibility of July 2000. The conclusion resulted from a decision that the more appropriate focus is meeting critical milestones for the Conversion and Testing Projects. Until these milestones are met it is impossible to provide a definitive implementation date. Attachment A are the START Test and Conversion Critical Milestones for each of these projects.

Testing Team

The Testing Team has three deadlines that fall within the critical path for the START Project:

1. Critical Reports for Testing and Reconciliation Complete by March 31, 2000:
   All identified project critical reports are executed and incidents recorded.
2. Integration and Subsystem Testing Executed by April 14, 2000:
   All identified critical components have been executed and incidents recorded.
3. Testing Team START Assessment by May 25, 2000:
   The Testing Team will conduct an assessment of each subsystem within START for the purpose of determining key risks and compliance to specifications. One component of this assessment will be to analyze the outstanding incidents and any production workarounds, identifying risks to implementation.

Testing will continue after April 14th and most likely up to the date of implementation. It is our goal to have all test cases for critical components executed by April 14th. This information will be used as a primary source for the START Assessment. If the Testing Team do not meet their April 14th deadline, there will be a greater degree of risk in the START Assessment.

Integration and Subsystem testing progress has improved as a result of increased efforts of the testing staff and better incident turnaround rates from SPL. Two new testers have been hired to address resource shortfalls in problem areas. The Testing Team, in conjunction with key CalSTRS staff and SPL, are continuing efforts to improve progress and to increase the awareness of problem areas and issue resolution.

Conversion Team

The Conversion Team continues to make good progress in extracting and translating the data from the current IDMS database into the START database.

The pre-trial run that began in November continues to be a high level priority and is expected to be complete by February 29, 2000. The pre-trial run has been used to determine the outstanding rework required prior to the first trial run and to develop the execution checklist, which will be used for actual implementation. In addition, the pre-trial run has resulted in the identification of system and data issues, which are being addressed by SPL and the business users.

The most critical issue for the Conversion Project is the implementation of allowable exceptions by SPL. Allowable exceptions are the business rule edits that are being relaxed within the START application for converted data where the data does not exist or does not meet the business rule requirements of START. The Conversion Team has been working closely with SPL to resolve these issues and to streamline the process to implement the allowable exceptions.

The first full trial run is expected to begin in March 2000, depending upon the maturity of the START system and the full implementation of all allowable exceptions. This critical milestone for the project will validate a successful conversion of the data within the allowable window period and provide a full size converted database for use in system and performance testing. While the final trial run is scheduled for May, an additional trial run could still be conducted prior to this if required and time permits.

Implementation Team

The Training Team is currently behind schedule as resources are redirected to higher priority project areas. Meetings have been scheduled with business management to determine how to bring the lesson development schedule back on track. A revised Training Plan will be completed by the Training Team and reviewed by START management the first week in March.
In February, the START Implementation Team worked on obtaining acceptance of the START

business process flows. Approval was obtained on the business flows from 10 out of the 12 business units. Currently, the Implementation Team and business managers are reviewing how the START system may affect business unit's processes and workload. We expect to have the analysis complete by end of March. The next user acceptance activities will include the review of Constrain Security profiles, START testing results and training documentation.

The Model Office phase has begun, which the primary objective is to model the production processes of the START system. The activities of Model Office are oriented towards two general objectives: 1) assuring all the necessary components of the START production environment are in place; and 2) provide an opportunity for the business areas to model how their office will work using the START system. The Model Office project plan is currently under review by START team members, which identified tasks to begin in March.

The START Implementation Event Schedule is currently being developed. The schedule will identify all activities needed to shutdown IDMS, convert IDMS data and implement START. It is anticipated that the schedule will include approximately 1,000 tasks. To date, the IDMS shutdown activities have been identified by the business. During February and March, meetings will be conducted that will identify the business requirements on bringing up the START system.

Issues

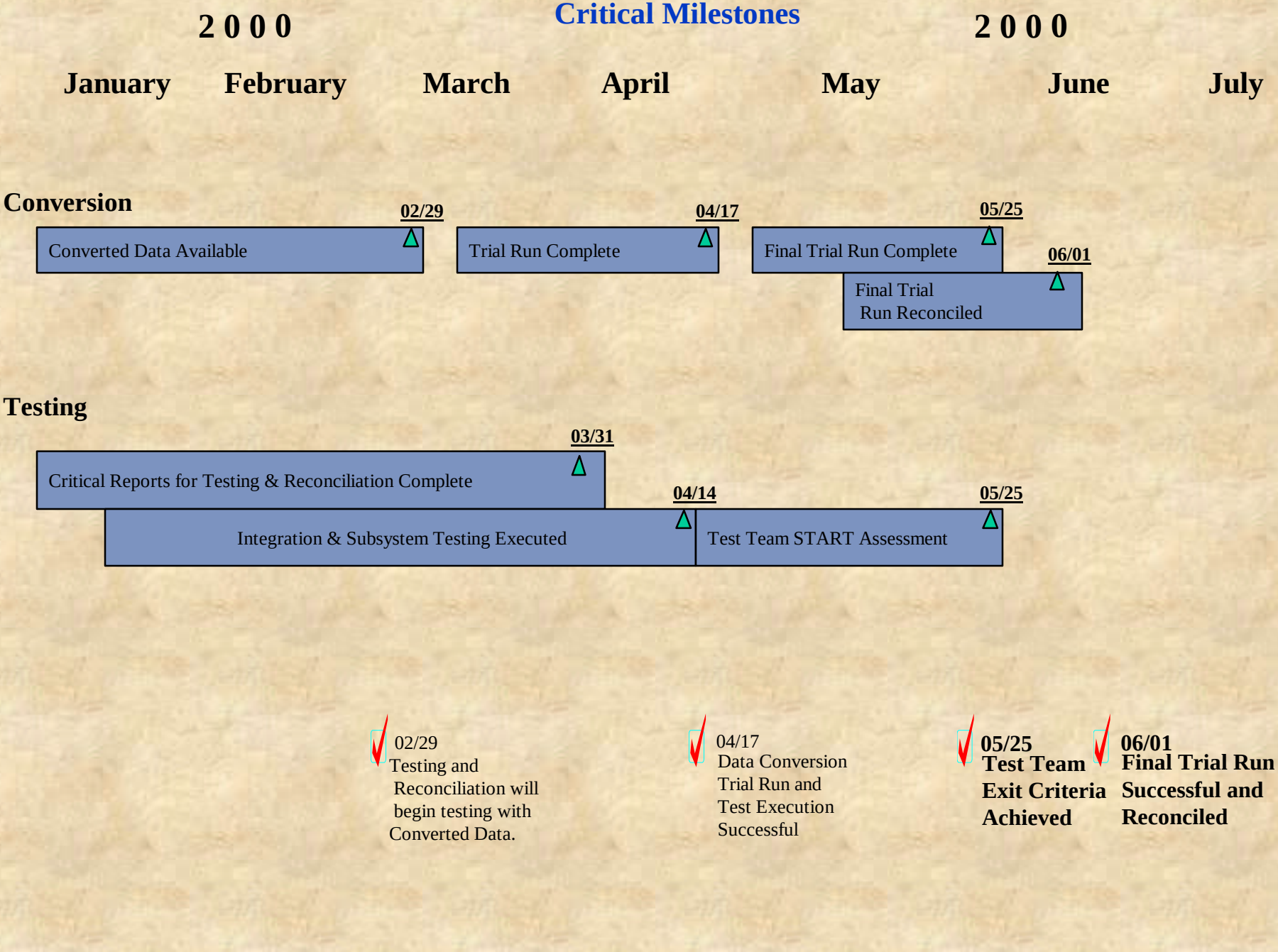
- The Teale Data Center has completed the installation of Software AG America's Year 2000 compatible release. SPL has tested their Construct Models in the new release and is working on unresolved issues. CalSTRS recompiled all software code developed to-date and has delivered a list of discrepancies to SPL WorldGroup for investigation. Some of these issues remain outstanding.

- Turn around time from SPL on the correction of identified incidents.

- Potential cost increases due to the conversion of data at the Teale Data Center or unidentified system changes.

Please see the attached monthly status report from the Oversight Consultant, Science Applications International Corporation (SAIC) (Attachment B) and SPL WorldGroup (Attachment C). SAIC has provided metrics of measurable project factors, such as change requests, issues resolution and incident tracking.

START Test and Conversion
Critical Milestones



Mr. Jim Mosman
CEO, CALSTRS
7667 Folsom Blvd
PO Box 15275
Sacramento, CA 95851-0275

February 17, 2000

Dear Mr. Mosman:

The following represents SAIC's monthly START Oversight status report for January 15, 1999 through February 15, 2000. Included in the report is a summary of activities for the period, a discussion of the status of the project, an updated summary of risks and mitigation activities associated with the project and project metrics for START.

The Cal-STRS Team has been reviewing program status. As discussed at the last Board meeting, there is concern that the date for the Conversion Trial Run may be delayed based on the need for programming updates that will allow converted data into the system, by bypassing some of the standard START error processing routines. The Conversion and START development teams have worked to develop solutions to this effort that will support the trial run schedule, as well as provide some solutions for final implementation processing. A "quick fix" solution has been developed for meeting trial run requirements and a more detailed solution is in the design process for the longer term solution. At present, it appears that the conversion team will be able to meet the current date for the April Trial Run and the team is working aggressively toward this goal.

Testing progress is improving, however, the team is still significantly behind plan. Progress must continue to be carefully monitored. The metrics that are being collected will facilitate this monitoring. Significant progress was made this month in the number of incidents that were fixed, however, the inventory of open incidents (those found and not fixed) continues to be large based on new incidents that were discovered. SPL has committed to apply additional resources to ensure that this gap does not increase. The gap in test case production and execution improved, but remains behind plan. Cal-STRS is adding resources to help address

this. There remains ample time to address these issues now – with proper corrective action and careful tracking of progress, Cal-STRS should be able to avert implementation schedule delays.

This past month the team looked seriously at their ability to meet the July implementation date. There are a number of risks associated with conversion, testing, and reconciliation that could, indeed, impact the ability of the team to go live in July. It seems prudent, however, to continue working toward the milestones that are currently defined and only change the date in the event of failure to meet critical milestones. Each of the upcoming milestones are significant and, if they are missed, there must be strong corrective measures taken to put the project back on schedule, even if the date is slipped. While managing to the milestones versus managing to a firm implementation date creates some level of uncertainty for implementation, failure to manage to those significant dates could result in a longer than anticipated delay. The START team is extremely motivated right now to complete the project, and this motivation level is critical success. Also, the trial run is very important to verifying the conversion approach and, if a significant problem is discovered, it should be found as quickly as possible. There is no benefit for arbitrarily moving the milestone date forward.

Changes to the status and risk portions of this report from last month are marked using standard MS-Word editing. The format of the status section is changed, due to the change in scope of the project. SAIC will continue to track progress of this important project. Some new metrics are provided for System-level testing and training. The risk matrix for the program has been reviewed and updated to reflect current project risks and mitigation measures.

Sincerely,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Laura J. Metzger
Vice-President
Manager, START Oversight Project

START OVERSIGHT REPORT

February, 2000

Science Applications International Corporation
Systems Integration and Support Division
10260 Campus Point Drive
San Diego, CA 92121

START OVERSIGHT STATUS

Summary of Oversight Activities:

SAIC has performed the following oversight activities for the CalSTRS START project in the December through January time frame:

- Attended various project status meetings
- Prepared CalSTRS board materials
- Compiled project metric data
- Reviewed status of development, conversion and testing efforts

Key START Oversight Issues

SAIC has identified the following key issues for START and is actively tracking the status of each issue area. A description of each issue is provided on the following pages and is updated on a monthly basis.

- Status of CIR development efforts and incident fixes;
- Status of the conversion effort relative to the plan;
- Status of testing effort relative to plan
- Management of implementation effort relative to plan

STATUS OF CIR DEVELOPMENT EFFORTS AND INCIDENT FIXES

SPL has provided a schedule for delivery of CIR software, which shows Cal-STRS receiving all software in ~~March~~April, 2000. Cal-STRS is reviewing this schedule and feels that with careful coordination with conversion and testing the dates will allow for on-schedule implementation. There are some resource issues associated with prioritization of conversion, incident fixes and CIR development work that SPL is addressing.

Critical and high incident responses are progressing, but the test team has experienced some delays while they await resolution of certain incidents. A process has been put together where the test team prioritizes the critical/high incidents to ensure that the ones that are most impacting test progress can be dealt with on a higher priority. Incident closure will be carefully monitored to ensure that problem resolutions can be implemented with a minimal impact on test team performance. There is a growing number of open incidents and ~~it is recommended that~~ CalSTRS and SPL ~~develop a plan for closing the gap in the number of open incidents~~ are addressing the issue. Significant progress was made last month in closing incidents, however, a similar number of incidents were found during test, so the overall gap has not changed. SPL has agreed to call back staff, if needed to support incident analysis to help reduce the backlog. ~~Failure to take corrective action in this area could result in a delay in project implementation.~~ With corrective action and careful monitoring, this issue should be able to be successfully addressed.

There are some discrepancies, as expected, between CalSTRS and SPL on incidents that are in and out of scope (i.e., those that require a CIR because they are new requirements and those that are not implemented per the specification). This is a particularly important issue where there are ambiguities in the specification. SPL and CalSTRS are implementing a review and escalation process to ensure that issues are quickly brought to closure and decided upon at the appropriate management levels.

Project metrics are now being tracked and are provided at the end of this report.

STATUS OF THE CONVERSION EFFORT

The conversion team has completed a detailed conversion work plan, which has been reviewed by the START. This plan will allow for the tracking of progress and status and provide task linkages so the impact of deviations from the plan can be understood. Status tracking and reporting of the conversion effort has begun. The test team and conversion team are working together to develop a plan for utilizing converted data in the testing process. A strategy for consolidating data management for the conversion and testing teams is being developed and implemented. This effort has had a staff impact on the conversion team, who is assisting in this effort. To continue to keep schedule milestones, planned staffing needs to be addressed quickly. A revised plan has been developed (and is included in the metric portion of the repo rt) that addresses the rework required to implement allowable exception processing to meet the April Trial Run.

Metrics associated with conversion progress are now included in this report. ~~The conversion plan is currently progressing nearly on-schedule.~~ CalSTRS must place the data design under formal configuration control to ensure that the conversion team is aware of any data format changes that are made and to assess to the impact of these changes on the conversion effort. The Conversion team must have insight into the potential data changes that each outstanding CIR has on conversion.

The Conversion Team also requires support from SPL in making changes to some of the load modules for conversion. SPL has assigned staff to address these requests. ~~Delay in providing these changed modules could impact the timing of the trial run.~~ Solutions are being designed to help resolve these issues. Significant progress was made in this area this reporting period. The ability of the team to meet the April Trial Run has been reviewed and the team believes that they can achieve that date with careful coordination between SPL and Cal-STRS.

~~Pre-trial runs are in progress and the team is resolving data issues prior to the trial run scheduled in January. A process has been developed to ensure that proper CalSTRS resources are applied to rapidly resolving the data issues. Prompt resolution of data issues at the operational level must continue to be a priority of the organization to ensure successful completion of the conversion effort.~~

~~Discussions have begun with CALSTRS Internal Audit team to ensure that processes and procedures are in place to verify the reconciliation between the new and old systems.~~

STATUS OF TESTING EFFORT

CALSTRS has finalized their testing strategy and are working to ensure that they can complete system testing according to their plan. The consolidation of testing and conversion management efforts should have a positive impact on the ability of the CALSTRS team to successfully complete these efforts and facilitate the resolution of resource issues that may arise in the coming months.

A detailed tactical plan has been developed. The test team is currently behind in creation of test scripts and execution of test scripts, although progress is being made to reverse the trend. Some of this has been a result of training the team, waiting for resolution of critical incidents that affect operation of the system, and holiday leaves. The test management team is confident of their ability to get the effort back on schedule in early 2000, but this must be carefully monitored. CalSTRS management has approved bringing on two additional staff to support this effort, which should be of help to the team. Progress in this area must, however, be carefully monitored, as failure to complete testing according to plan could result in a delay of implementation.

Workflows, which form the basis of the system level testing effort, have been completed and are being approved by the CalSTRS operational units. It is imperative to ensure consistency between the workflows and the specifications, and to identify any discrepancies so they can be resolved as early as possible.

The test team has prepared an estimate of the number of incidents anticipated in the system, based upon the nature of the START program and industry standards. To date, the number of critical and high incidents has been ~~slightly~~ higher than anticipated but the number of overall incidents has been lower than projected. These metrics are provided in the metric portion of this report. The rate of discovery of incidents is also being tracked internally as a measure of when testing might be considered to be adequate.

The need to create and manage test data is a major risk area. Strategies for test data management have been developed and are in the process of being implemented. Failure to provide a strong test data environment will impact the ability of the organization to successfully complete the testing process.

MANAGEMENT OF IMPLEMENTATION EFFORTS

Considerable progress has been achieved in the development of an implementation strategy. Tasks have been identified with associated responsibilities documented. Points of contact for each CALSTRS organization are being assigned responsibility for the acceptance activities. The individual teams will then produce resource needs as well as timelines. CALSTRS will then have an opportunity to ensure that they can meet staffing requirements and make plans to add staff, if necessary.

The joint START workplan for implementation is being developed. Staff has been assigned to further refine the implementation plan and support development of this overall START project and implementation plan.

A draft Maintenance Strategy has been developed and work is continuing on the development of the Maintenance Plan. SPL should be involved in reviewing this strategy.

A team has been assembled to determine the Downtime Plan. A draft document has been produced and has been reviewed by management. The plan has been enhanced to include "inch-stone" management of events during a 90-day period surrounding the implementation period.

The START Training program is being developed. CALSTRS is working with SPL to determine how best to incorporate the "train the trainer" training SPL is providing. Training materials are being developed. This effort is behind schedule, due to illness of a member of the team, but it is anticipated that they will be back on schedule in early 2000.

Efforts are underway to determine how maintenance activities will be performed following implementation. Coordination between ITSD and the START team is required to ensure a smooth deployment of the system.

Efforts are also underway to define a contract scope of work and vehicle for maintenance support following implementation.

PROJECT RISK SUMMARY

The following table describes the overall risks associated with the START project. Risks are always present and unavoidable in any software development project. Risk management is an important part of the project management process, as it helps the project manager foresee potential problems before they occur. Mitigation strategies can be put in place to deal with risks before they become problems.

The following risk summary table identifies key START risks, defines the impact of the risk if it were to become a problem, assigns a probability of the risk occurring, describes the risk and identifies mitigation strategies or recommended actions that could help avoid the realization of the risk. Risk impact levels are defined as follows:

- High: If not addressed, there could be severe impact to the project success due to unacceptable schedule slip, cost impact or quality of product
- Medium: If not addressed, there could be significant impact to the project success due to unacceptable schedule slip, cost impact or quality of product
- Low: If not addressed, there could be some impact to the project success due to unacceptable schedule slip, cost impact or quality of product

Probability of risk is defined as follows:

- High: Mitigation measures do not seem sufficient to overcome the risk or the risk is already being dealt with as an issue on the project
- Medium: Mitigation measures are being followed and appear to be successful, but the risk threatens to become an issue
- Low: Mitigation measures are in place and the risk appears to be well controlled at this point in the project.

Changes to the risk summary table that have been made since the last delivery of this report are denoted with standard editing marks. This should facilitate review of the material.

Some risks have been removed from the table, as they no longer represent risks to the project. These items are marked as deleted in this version. They not be included in subsequent risk tables.

Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
Project completion not on schedule.	High	High	The date for complete software delivery, including outstanding CIRs is planned for March, 2000. Issue resolution and associated re-design has impacted the ability to deliver software on-time.	The implemenation date has been moved to July, 2000 based on the currently planned delivery dates. A consolidated CALSTRS conversion, testing, and implementation schedule has been developed to ensure that adequate staff resource exist to meet planned March 2000 implementation date.	The START teams have revised plans to reflect the new implementation schedule. The START project office has developed a consolidated workplan. The consolidated schedule continues to be updated to reflect potential changes in delivery schedule. There are risks associated with meeting the July Implementation date, but the team has decided to continue working toward the individual milestones and assessing progress to meeting the implementation date as the milestones are completed.
			Changes resulting from major legislation over the next 18 months could impact the ability to complete the project on schedule.	Implement formal program management reviews to ensure the schedule accurately reflects the development effort.	A team comprised of the SPL project manager, the test manager, the conversion manager, and the oversight manager meet each month before the planned START management meeting to review project status and discuss impact of any schedule changes.
			Conversion and testing efforts could cause delay in final implementation.	The current system can continue to operate until START is ready for implementation. The old system will be a fallback method.	All major issues have been discussed and resolution has been reflected in the new specification releases. Conversion and testing progress must be tracked carefully to ensure schedules are maintained. defined.

Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
Project completion not on budget.	Med	High	Since the project is taking considerably longer than anticipated there are budgetary concerns to be addressed. Recently approved project budget addressed known concerns.	Since this is a fixed price contract, control of system changes can be used to control project costs. Costs for testing and conversion (CALSTRS activities) may be greater than anticipated and require more resources.	The improved change management process will provide CALSTRS with an improved means for tracking cost impacts due to changes. Some enhancements to the process may be required and are being considered as part of a continual process improvement effort. Detailed project plans are being developed and reviewed by the START project office to determine impact. CalSTRS is finding that programmers are being released from Y2k Project and they are able to get personnel at lower than expected cost.
Staffing will be available to support implementation and operation and maintenance of the system.	Med	Med		CALSTRS has had difficulty staffing for conversion, and may be requiring additional staff for testing and implementation. CALSTRS must identify staffing requirements early to allow for hiring of staff or consultants to support effort. The system experts are in the critical path for issue resolution, conversion, testing and implementation.	Conversion staffing has been successfully completed. Contract allows CALSTRS to use T&M contracting for support services. This could be applied for operation and maintenance. CalSTRS hiring additional test resources. The START project office has hired a person to coordinate system expert schedules and consolidated reporting of the experts to START. CALSTRS management will need to be responsive to needs of the

Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
					system experts to ensure project schedules can be met.
CALSTRS work flows are significantly impacted by the new system, causing problems in acceptance and post-implementation.	Med	Low	Any new IT system requires that work flows be examined to ensure the system can operate in the current work flow, or that work flows are changed to reflect capabilities of the new system.	The START system has been designed to minimize the impact on day to day work flow.	A task for defining work flows to determine a critical path for the system completed and workflows are being reviewed for approval by staff. While some work flow issues have been identified in this effort, no major problems have been identified. Analysis of overall workflow and system performance impact is being considered.
				The testing effort should verify that all work flows can be completed and that the necessary controls are in place to effectively operate the system. The workflow development and planned system acceptance strategy also addresses this issue in the next months.	System experts have been made aware of the need to include these considerations in their test procedures. System experts are currently working with the test team to develop process flows that will be used for generation of system test scripts. As these flows are developed, CALSTRS should be able to identify problems and seek resolution. A review of workflow to requirements in the specification should be conducted to ensure there the workflows accurately reflect the specifications.
				Audit procedures must be reviewed to ensure compliant operation of the system and of conversion.	An EDP Auditor has been hired to support the CALSTRS Audit organization in definition/verification of audit processes. Initial strategies for audit of the conversion process are being developed through reconciliation processes.
				Training should address possible changes in workflow processing, where applicable.	Address necessary workarounds and stress system differences in the training sessions.

Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
START functionality does not meet CALSTRS needs	High	Lov	Any new IT system runs the risk of not meeting user needs.	Ensure users should be involved in requirements effort. Specifications must detail planned functionality and be reviewed by the user team. Acceptance test criteria must be specified.	CALSTRS has invested significant resources to ensure that users of the system understand what is being developed and to ensure that it meets operational needs. Completion of specifications and approval of the design minimizes this risk. User acceptance criteria has been defined and the operational units will be responsible for accepting the system, based on a defined process.
CALSTRS has inadequate staff resources to implement test strategy.	Med	Med	Testing will be a major component of the system implementation effort. This effort will require significant CALSTRS resources. There are significant ramifications in terms of SPL payment and system deployment if there are inadequate resources to test the system in a timely manner.	Begin addressing staffing needs early, based on the detailed test plan. Involve users in the testing and acceptance of the system.	CALSTRS has hired an experienced testing consultant to manage and plan the testing effort. The test team is working with the organizational unit to define staffing requirements and determine support levels required. Contingency plans are being developed that address potential resource constraints. Additional test staff is being hired. Careful monitoring of test progress is critical to ensuring on-time implementation. A core CALSTRS test team has been formed that includes system experts and IT staff to support planning and coordination of the test effort.
Data in current system not able to be converted correctly.	Med	High	There may be data in the current system that is not stored in the new system. Also, there may be data in the new system that is not supported in the old system.	Define conversion strategy.	The conversion strategy has been jointly developed by CALSTRS and SPL and should provide a workable approach. Both gradual and "big bang" approaches were considered. The strategy is currently being excercised as the pre-trial runs are being

Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
			There is also a concern that validation criteria in the new system may not be met by the old data.	A conversion work plan must be completed to determine feasibility of the conversion being completed within the necessary schedule. Audit procedures are needed to verify processes for conversion and to validate data conversion.	performed with a high degree of success. Conversion programs are being run to identify problems. A trial run is planned in February. A work plan has been completed, and is being used to track progress of the effort. This plan is regularly updated when the revised schedule is received. An EDP Auditor has been hired and is in the process of developing a strategy for auditing the conversion processes and defining reconciliation processes. This issue has not been addressed directly. The item will be considered during reconciliation.
Ability to convert and go live can not be completed in available timeframe.	High	Med	There is a significant effort required to convert existing data and to verify that conversion is accurate. There is a limited window in which to perform this task to ensure clients receive benefits checks on time.	Develop detailed plan for crossover in conversion plan.	This area is being addressed in the implementation plan. Strategy should be piloted and proof of concept performed/ trialed prior to actual cut-over. Trial runs will accomplish this. The conversion strategy is working carefully on the time it takes to actually convert data and trying to make it as efficient as possible.
CALSTRS staff can not maintain the system following delivery	Med	Low	Technology transfer is an integral part of the project. CALSTRS staff must be able to understand how to operate and maintain the system following acceptance and delivery.	Provide contractual means for providing technical support following completion of system development. Provide technical documentation with the system.	A T&M item is included in the contract to allow for technical support by SPL following system acceptance. A separate vehicle is being looked at for providing post-warranty maintenance. Scope of services and contract vehicle are being defined. To contain costs and schedule, the current effort requires SPL to generate only external specification documentation. Internal specifications are provided at a lesser level,

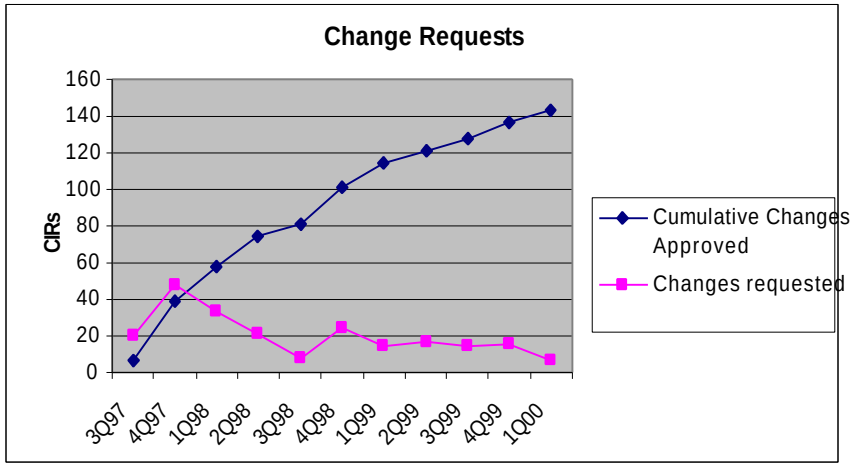
Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
					with SPL providing notes, but not providing formal deliverables. Technology transfer opportunities are provided to offset some of the limitations on documentation. The CALSTRS IS team has provided standardization guidelines to SPL and SPL has agreed to meet them. Technical interchange meetings could be conducted that would assist the START conversion and test team in better understanding some technical issues withoug increasing the need for documentation.
				Develop Maintenance Strategy/Plan	ITSD has formed a team and has selected a consultant services to support development of a maintenance strategy plan for START. A draft release has been completed and the Team is continuing to update the strategy and develop a plan
Users can't operate the System	High	Low	START system will be new and require adequate training of staff prior to "go live", but sufficiently close to cutover that users remember how to operate the system.	Include training with delivery of the system just prior to "go live".	Training is provided for in the current contract and is being considered in the overall implementation plan.
				Involve users in early use of the system.	Users organizations will have opportunities to see how the system operates in the testing efforts. Many users will have direct experience with the system through these activities.

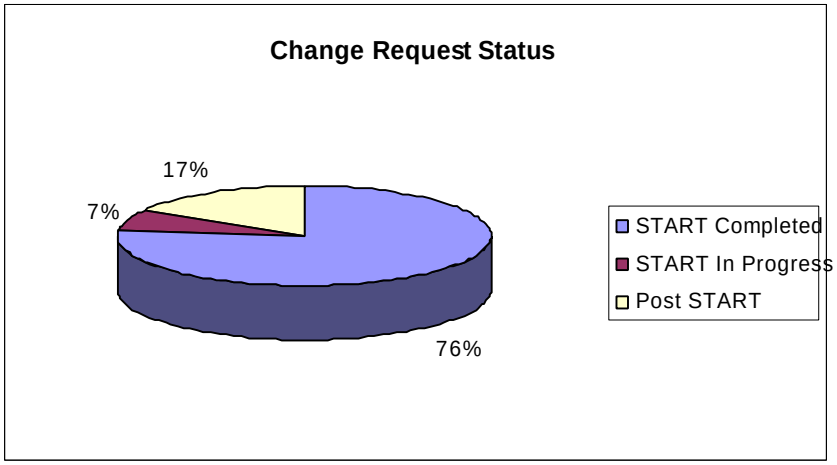
START PROJECT METRICS

Using metrics, project progress is measured through the completion of activities on the project schedule. Progress indicators are used to monitor progress in terms of task completion and task output. The difference between the planned and actual completions is an indication of project adherence to the plan. This type of progress monitoring is currently being conducted. In addition to the planned versus actual indicators, START project monitors trends in the rate of progress.

Trends in the number of change initiation requests

This chart shows the current total number of Change Initiation Requests (CIRs) over time and the number of changes requested each quarter. CIRs represent requirement changes and typically have an impact on both cost and schedule. Ideally CIRs are resolved in the early stages of a project and there should not be significant growth in the number of CIRs in the later stages of a software development effort. The Change Request Status reveals that many of the change requests have been completed or postponed. Only a small portion will need to be completed before the end of START. The current SPL schedule indicates that CIRs required for the initial system will be completed in March, 2000.

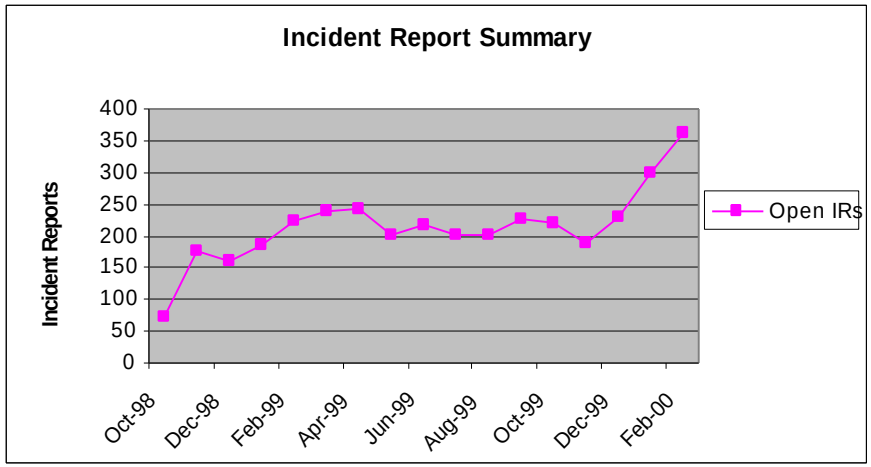


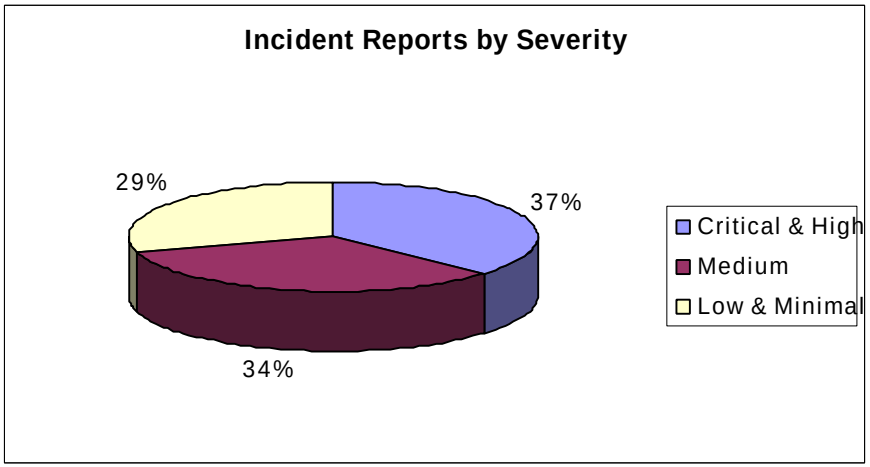


Trends in the number of Incident Reports

An incident report is a document used to recognize record, track, and close anomalies detected in the software and its accompanying documentation. Incident reports provide an indication of the quality of the product not only by their number, but also by the rate at which they are written. The number of incident reports also reflects the amount of rework that may be expected. This metric provides managers with insight into the quality of the product, the software reliability, and the effectiveness of testing.

The graph shows the overall trend in the number of open incident reports. The curve of open trouble reports should decrease over time once System Testing began in September 1999. Ideally, as testing progresses, it takes the test team longer and longer to discover new problems because early testing discovers more common defects. However, as system testing has continued, the number of incident reports in the Critical & High and Medium severity categories has grown from 43% of incidents to ~~68~~71% of incidents, and the total number has recently started to grow significantly. The growing number of these incidents indicates that extra time and effort may be needed to correct these errors. This metric must be carefully monitored to ensure that the current schedule remains credible as the project continues.



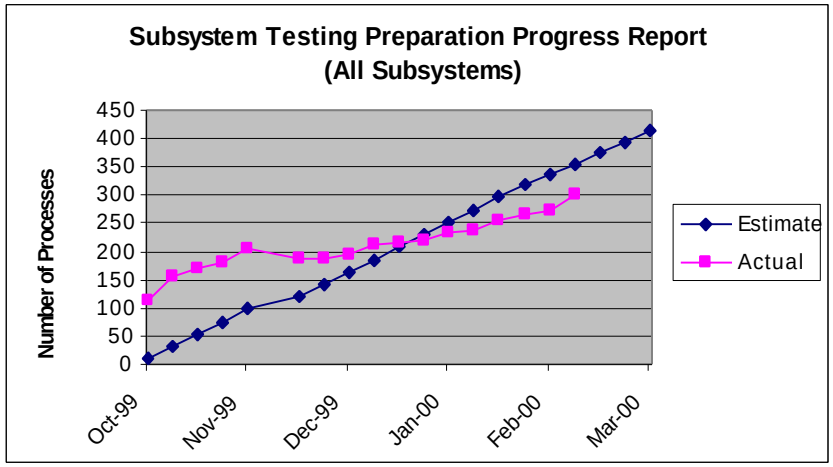


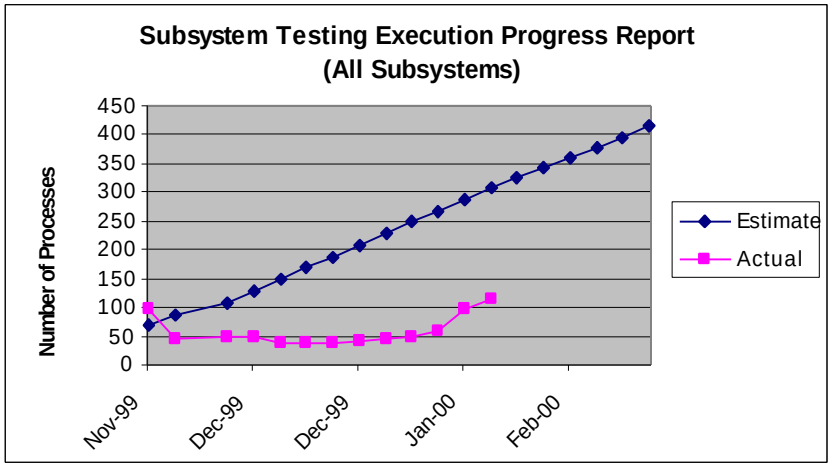
Trends in Testing: Test Script Preparation and Execution

The Test Script Preparation Metrics tracks the ability of the test writers to meet the proposed schedule. If the test writing is behind schedule, the actual testing of the system may fall behind. The Test Script Execution metric reveals the progress of the test team in executing tests to completion.

Subsystem Testing

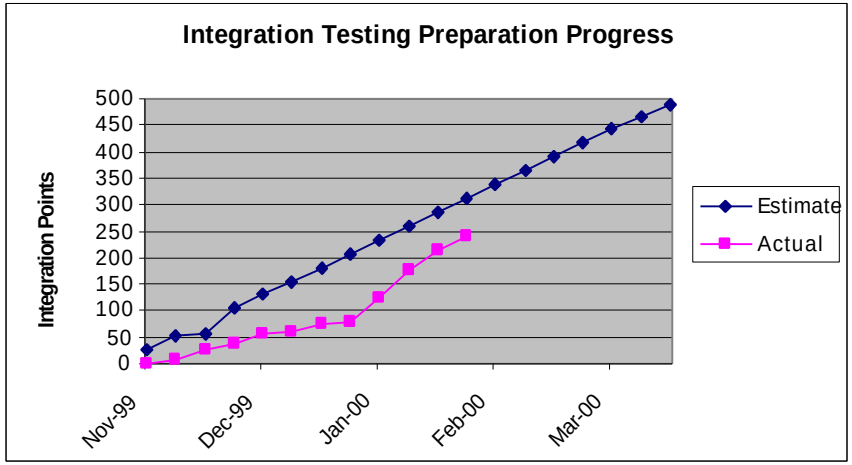
The results at this time show the test team slightly falling behind schedule for subsystem test script generation, and significantly falling behind for subsystem test script execution. However, progress has begun to increase and reverse the trend over the past months. ~~Because the test execution is falling behind, t~~This metric will need to be carefully monitored. The team believes they can get back on track early in 2000. ~~This metric must be carefully monitored and specific actions should be taken to reverse the current trend.~~

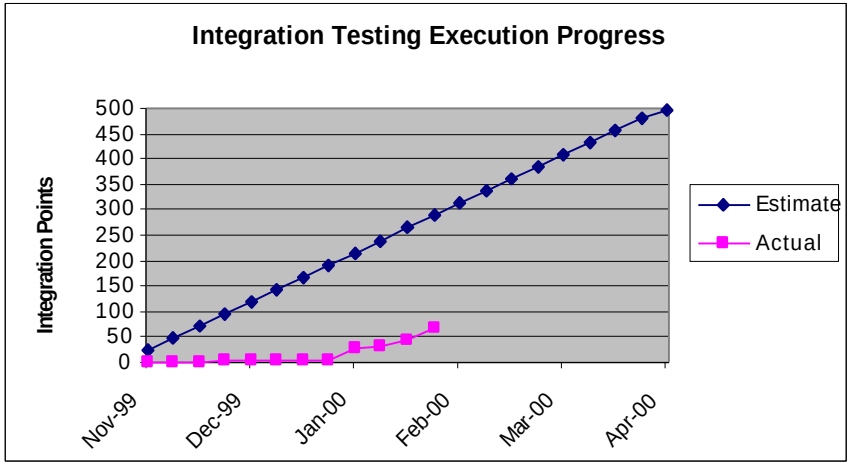




Integration Testing

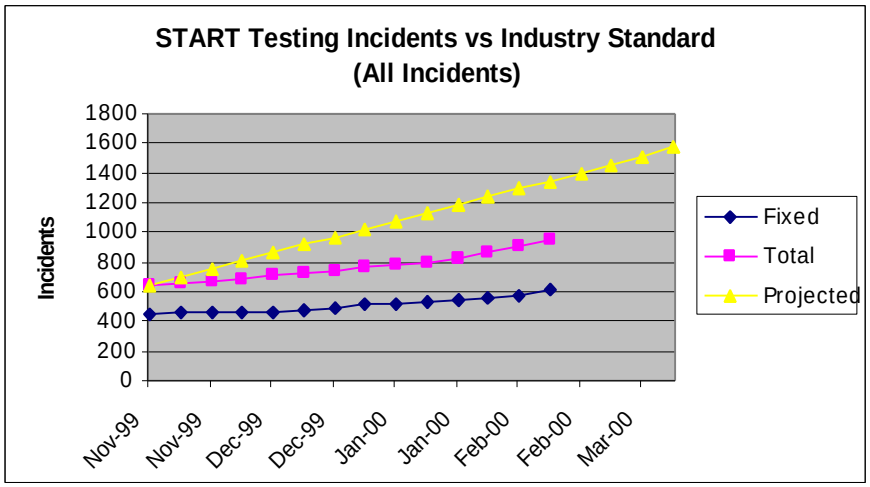
The results at this time show the test team falling behind on integration test script generation and execution. However, during the last month, the team has begun to reverse the earlier trend. The team believes they can get on track in early 2000. ~~This metric will need to be carefully monitored, however, and specific actions should be taken to reverse the trend.~~

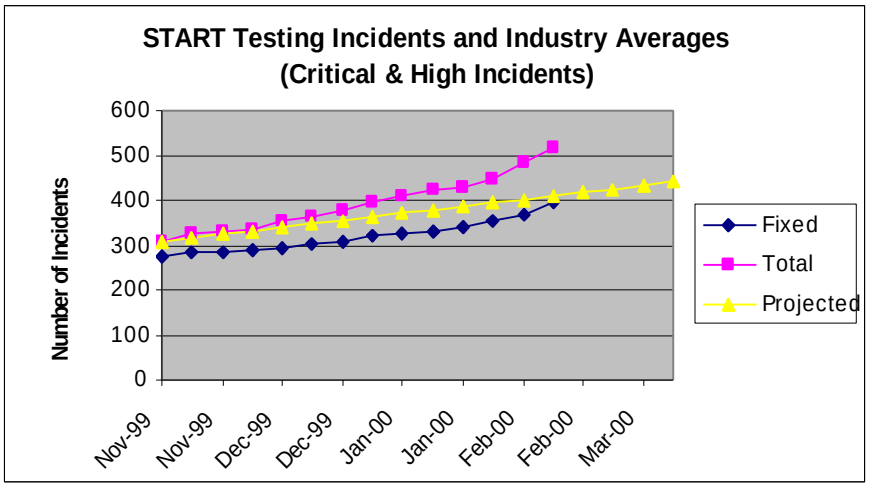




Trends in Testing: Test Results Compared to Industry Standards

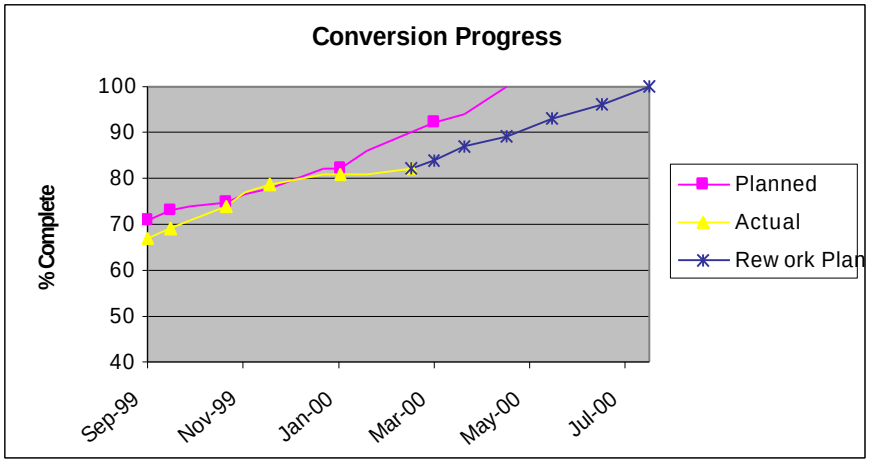
The Test Results Summary indicates the overall quality of the products being delivered as well as the progress of the testing team in executing test scripts for deliverables. A projection of incidents was determined based on industry standards for software of this type. As shown, the overall number of incidents is below the projected, but the number of critical and high is nearly as predicted, but slightly above projected. As seen in another metric, critical and high incidents are increasing faster than projected.





Conversion Program Development Status

This metric is intended to provide insight into the status of the effort to develop conversion programs. For most data elements, a program must be written to extract data from the IDMS database and transfer the data elements to the proper elements of the new START database. This metric does not address actual data conversion. A metric will be added at a later time for that status, as the actual conversion becomes a more critical factor in the project. In the development of the conversion programs, the conversion team needs system expert time to help identify the method that will be used to resolve data issues. The plan for the conversion effort was updated in ~~October~~ February to reflect the rework progress~~delayed software deliverables~~, and with the new schedule, the progress is on track.. Additional staff were added to put the effort back on plan. Both the original and ~~new~~ rework plan are provided for reference.



SPL WORLDGROUP
CONSULTING

START PROJECT STATUS

January 31, 2000

OVERVIEW

Most of our Lead Analysts are now focused on assisting the CalSTRS Conversion Team in establishing the initial START database. The remainder of the team is focused on the analysis and repair of Incidents reported by the CalSTRS Testing Team. Change Orders requested by CalSTRS might be somewhat delayed because of the urgency of Conversion and Testing issues.

PLANNED VS. ACTUAL

WORK COMPLETED THIS MONTH
Six Change Orders were delivered during January, one more than expected.

WORK NOW IN PROGRESS
Wherever the requisite START data is not available on existing cases, Conversion alternatives are being evaluated with a view towards meeting the planned implementation date. This may require some adjustments to the current START software in order to differentiate between converted cases and those initiated under START rules.

Now that most of the Change Orders have been delivered, we are making a concerted effort to address a substantial portion of the Incidents raised by the Testing Team.

WORK SCHEDULED TO BE COMPLETED NEXT MONTH
Of the three Change Orders originally scheduled for February, one will be delivered and two will be postponed until Conversion issues have been accommodated and open Incidents have been addressed.

MILESTONES (Project Deliverables)

OVERALL PROJECT SCHEDULE
The only remaining deliverable from the original Project Schedule is “Planning and Actuarial”, which has been postponed until the Conversion, Testing and Change Orders have been addressed.

THOSE COMPLETED THIS MONTH
Six Change Orders were completed during January.

THOSE PLANNED FOR THIS MONTH BUT NOT MET, WITH NEW DATES
None to report.

PLANNED FOR NEXT MONTH
One more Change Order will be delivered during February.

CHANGE ORDERS

CHANGE ORDERS INITIATED THIS MONTH
Three Change Orders were initiated during January.

CHANGE ORDERS APPROVED THIS MONTH AND ASSOCIATED DOLLARS
Three Change Orders were approved this month with a dollar value of $163,754.

TOTAL VALUE OF CHANGE ORDERS INITIATED FOR THE PROJECT
$2,643,851.

ISSUES

None to report.